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ABSTRACT

A randomized experiment was performed in five high schools in which a random half of the students in a sophomore English class received a special 8-week library-oriented treatment designed to improve students' understanding of, attitudes toward, and use of the school library. The treatment was found to have a statistically significant effect on library use and library attitudes for the librarians in the study. The findings were strong enough to allow generalizability to the population of librarians for library attitudes, but not for library use, and the increase in use was much greater with some librarians than for others. There was not a measurable effect on students' reading attitudes. An unobtrusive response integrity scale indicated that differences in students' reported attitudes were not due to the social desirability response set. Statistical results are presented in two tables, and references are provided. (Author/KM)

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The Effects of a Special Motivational Library Program on High School Students' Library Use and Attitudes*

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ABSTRACT

A randomized experiment was performed in five high schools in which a random half of students in a sophomore English class received a special eight-week library-oriented treatment designed to improve students' understanding of, attitudes toward, and use of the school library. The treatment was found to have a significant effect on students' library use and the proportion of students using the library for the participating librarians at the five high schools; the effect of the treatment differed greatly among the participating librarians, indeed, the treatment-by-librarian interaction was so great that the results cannot be safely generalized to the population of high school librarians. The treatment effect was also significant for improving students' attitudes toward the library/librarian and can be safely generalized to the population of high school librarians. There was not a measurable effect on students' reading attitudes. An unobtrusive response integrity indicated that differences in students' reported attitudes were not due to the social desirable response set.

The Effects of a Special Motivational Library Program on High School Students' Library Use and Attitudes

Many educators and researchers believe that good school library service enhances the quality of education (Marchant et al., 1984). There is, however, wide disagreement among librarians regarding the importance of teaching traditional library skills. Some librarians believe that students need only know the elements of bibliography just as they need only learn the elements of computing (Havens, 1984). Special library-based programs incorporating "fun-type" activities have shown to have significant effects at the elementary and junior high school levels (Schon, Hopkins, Everett & Hopkins, 1984a; Schon, Hopkins, Everett & Hopkins, 1984b). The purpose of this study is to investigate the effects of a special school-library-initiated and library-based motivational program on high school students' library use, library/librarian attitudes and reading attitudes.

SELECTION OF LIBRARIANS AND SCHOOLS

To encourage participation in the study, the special program was described in the newsletter of the Arizona State Library Association, with an invitation to the librarians to participate. In addition, a letter was sent to each of the librarians in the 92 high schools in Arizona, encouraging them to participate. Six (five female and one male) librarians from five different high schools indicated that they were willing and interested in participating. (Two librarians were in one high school and worked as a team. Hence, they were considered one unit for purposes of the analysis.) The median number of years of school library experience was nine.

Two of the five schools were situated in middle-income areas and three were in low-income areas. Both urban and rural settings were represented. Four of the schools included grades 9-12 and one included grades 10-12. The schools ranged in size from 550 to 2300, the median number of students per school being approximately 1500.

In order to maximize the representativeness of the sample, and ensure that the students were enrolled in a course in which library use was quite relevant, a tenth-grade English class was selected in each school; one-half of the students were randomly assigned to received the special treatment, the others serving as the control group. A total of 143 students participated (134 tenth graders, 7 eleventh graders and 2 twelfth graders).

PROGRAM DESCRIPTION/TREATMENT

Procedures for High School Library Study* (Everett, 1984) outlines for the school librarians a program of specific library-related activities designed to improve students' attitudes and use of the school library. A copy of this guide was provided to each librarian with a plan for the eleven weeks (eight weeks of treatment plus three weeks of data collection) of the study.

The eight-week special library program was implemented independently at each of the five high school libraries. Each week at each school the experimental (E) group of students was given approximately fifty minutes of the special treatment. Each of the eight required topics, together with a detailed structured outline of activities, materials, displays, speakers, questions, etc. was implemented by each librarian during the course of the study. The eight topics pertained to heroes, science fiction/ fantasy, war, hobbies, sports, adventure, personal conflict and music.

The students' library use was monitored during the final two weeks of the eight-weeks of treatment and during the three weeks following the treatment. To insure fidelity with the treatment procedures, each librarian was interviewed at least biweekly. Questions were answered and suggestions were provided as needed. Close communication was maintained with the librarians to provide guidance in the implementation of each activity/topic, and to record any problems and variations in the approach and emphasis at each site. Following each topic/activity, each librarian gave a written evaluative reaction.

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*A copy of this guide is available for one dollar from the Department of Educational Technology and Library Science, Arizona State University, Tempe, AZ 85287.

DEPENDENT VARIABLES

The principal student outcome variables of the study were two behavioral and two affective measures: (1) the number of times each student used the library (LU-#), (2) whether or not the student used the library (yes = 1, no = 0) during the five-week, data-gathering period (LU-p), (3) student attitudes toward the school library/librarian as indicated by their responses to the Library Attitude Scale (LAS), and (4) student responses to the Reading Attitude Scale (RAS). Two use measures are needed to quantify both (a) the change in total library use, and (b) the proportion of the student populations that used the library. Library use was monitored by having each E and C student "sign in" each time the library was used, indicating the intended use (study, resource/research, class activity, or free time). As anticipated from earlier studies (Schon et al., 1984a, 1984b), the students frequently needed to be reminded to "sign in."

The logical validity of the students' responses to the two affective measures, LAS and RAS, was enhanced by requiring students to respond anonymously to thirty-three three-option ("Yes "?" "No") attitude questions the week following the special eight weeks of the special program. The LAS is composed of sixteen items that were developed using Davies' (1979) criteria for evaluating the school library/media program as a guide. As in two earlier studies (Schon et al., 1984a, 1984b), both the LAS and RAS were found to have high reliability indexes--(.90 and .92 respectively). A special Response Integrity Scale (RIS) (i.e., "social desirability", Hopkins & Stanley, 1981) was embedded within the other items to allow this response style to be monitored. The RIS was used to assess whether the E-C difference (if any) was due to this response style artifact. If the groups do not differ on the RIS, any treatment effect can be interpreted with greater confidence since the difference is not likely to be the result of the E students responding to the perceived "demand characteristics" of the situation.

DESIGN

The principal statistical design in the study utilized two-factor ANOVAs: a 2 x 5 Treatment-by-Librarian design. The "incremental universe of inference" analysis strategy (Hopkins, 1983) was employed, dictating that the Librarian factor be initially viewed as fixed (i.e., the fixed-effects ANOVA model is used) to assess whether there is a reliable treatment effect for these five librarians. Only if significance is attained in this restricted universe of inference, is the question of generalizability of the treatment effects (if any) to the population of high school librarians "like these" considered. A 2 x 2 Chi-square test of association was also performed on a dichotomous variable (1 or 0) as to whether or not each student used the library at least once during the five-week interval (LU-p) in which library use was monitored.

RESULTS

Treatment Effects: Treatment-by-Librarian ANOVAs were employed to assess the effects of the experimental program on library use and attitudes. The first row of Table 1 gives the F-ratios for the difference between the E and C means for three dependent measures. Directional hypotheses were employed for the treatment effect, since (1) a negative treatment effect was judged to be highly improbable, and (2) the authors' previous studies found differences in the expected and predicted direction.

Library Use. Notice that there was a statistically significant ($p < .001$) difference in favor of the E group in average Library Use (LU-#), when the Librarian factor is viewed as fixed. Associated means and effect sizes are given in Table 2. Observe that the average E student used the library approximately three (2.94) times during the five-week data gathering period, whereas the mean for the C groups was only about one (1.11). The effect size (ES) of the treatment effect was .21. Likewise, the percentage of students in the group using the library at least once during the five week period (30.6%) was significantly ($\chi^2 = 11.1$, $p < .001$) greater than that for the C group (21.4%)--a relative increase of 43%. Notice that under ordinary (Control) circumstances only about one student in four (21.4%) used the library even once during the five weeks of the data-gathering period; the increase in the proportion of users in the E group must obviously come from this "non-user" subgroup, consequently it would appear that approximately 9.2/78.6 = .12 or about one-eighth of the non-users of the library became a user as a consequence of the treatment.

The desired universe of inference is approached by treating Librarians as a random factor, i.e., viewing the participating librarians as a representative sample of the population of librarians to which to generalize. In this instance, the analysis addressed the question, "Can the treatment effect be generalized to other librarians like those represented in the study." The error term in the ANOVA for this purpose becomes the Treatment-by-Librarian (T x L) interaction; the F-ratios for the mixed-model ANOVAs are given in brackets in Tables 1 and 2. The effect of the special treatment on students' library use cannot be safely generalized to the population of librarians, because of the large Treatment-by-Librarian interaction, i.e., the effects of the treatment varied greatly among the librarians.

Two separate additional ANOVAs were run to examine difference during the last two weeks of the treatment period and the three-week post-treatment period; the pattern of findings was essentially the same as for the total use data, hence will not be reported separately. Four additional ANOVAs were run for type of library use (Class activity, research/resource, study, free-time), but are not reported because the pattern of findings was not different from that for total use. A separate run was also made that included the third factor of sex in the ANOVA; it found

no significant sex difference in library use, and no Treatment-by-Sex interaction.

Librarian Differences. Apart from the treatment effects per se, there were great differences among librarians (schools) in library use ($p < .001$), ranging over the five-week assessment period from a mean use per student of only .23 times in one school to 5.9 in another, with a median of .86. Similarly, the proportion of non-users (during the five-week data-gathering period) ranged from 54% to 91%! Although an ancillary finding for the current study, this issue appears to be a fruitful topic for further research to assess whether it is a function of the type of library, type of setting, the particular librarian, characteristics of students, etc.

Treatment Effects: Library/librarian Attitudes. Two affective measures were used as outcome measures in the study: the Library/librarian Attitude Scale (LAS) and the Reading Attitude Scale (RAS). Since the results from an ancillary dependent variable, the Response Integrity Scale (RIS), have a direct bearing on the interpretation of the results for the LAS and RAS measures, the RIS findings will be presented first. The RIS scale had a reliability index of .74. Fortunately, when the RIS was employed as the dependent variable the F-ratio for the Treatment means did not approach significance ($F = .06$, $p > .80$). Consequently, the findings for the treatment main effect for the attitudinal dependent variables would not seem to be biased by this potential "reactive effect."

The results from the Treatment-by-Librarian ANOVAs are given in Table 1. Notice that the treatment effect on the LAS scale is substantial (ES = .33), and potent enough to allow the effect to be safely generalized ($p < .01$) to the population of school librarians. Again, there were large differences among the librarians (schools). Notice, however, that the interaction did not approach statistical significance ($p = .33$), indicating that the positive treatment effect did not differ significantly among librarians. The final question on the LAS, "If you were asked to grade your school library, what grade would you give it?", the mean "GPA" for the E was 2.80 vs. 2.62 for the C group. Although both groups gave their libraries mediocre marks (B-), more of the E students gave their libraries a grade of "A" or "B".

Reading Attitudes. There was no significant treatment effect on reading attitudes. Differences among librarians (schools) were not significant ($p = .86$). (As expected, the reading attitudes of girls was higher than for boys).

Librarian Comments

At the conclusion of the study, each librarian was interviewed to obtain their perceptions of the effects of the program. Five of the six librarians indicated that the program was an improvement over the conventional approach. These five librarians were most enthusiastic in their support of the experimental program. They especially indicated that they enjoyed

getting to know and working closely with the students in well-organized, carefully selected topics. They noted that several E students who had never been in the library before, became regular users of the library as a result of the program. They also noted that working with the English teachers reinforced and improved their professional relationships with them. They reported that the study forced them to do things with the students that they had never done before. They noted that student interest was especially high in the hobbies, war, personal conflict and science fiction/fantasy topics. With the exception of one librarian, they were delighted to have taken the time to plan and prepare special library-related activities that encourage student use of the library for study as well as recreational purposes.

Table 1

Treatment-by-Librarian ANOVA for Library Use, Library Attitudes (LAS) and Reading Attitude (RAS) Measures[a]

		LU-#		LAS		RAS	
Source	df	F	p	F	p	F	p
Treatment (T)	1	11.49* [1.58]	<.001 [>.25]	2.81* [15.29]*	.048 [<.01]	.002	.97
Librarian (L)	4	19.40*	<.001	1.64	.17	.49	.74
T x L	4	7.28*	<.001	1.15	.33	.86	.57
Subjects:LT (s:LT)	133	(MS = 9.72)		(MS = 42.0)		(MS = 62.3)	

[a]Bracketed F-ratios denote that Librarians are defined as a random factor.

*Result is statistically significant at least the .05 level.

Table 2

Experimental and Control Group Means and Effect Sizes (ES)

Dependent Variable	Means E	Means C	ES[a]
Library Use: LU-#	2.94	1.11	.21
LU-p	30.6%	21.4%	.21
Library Attitude (LAS)[b]	37.73 (2.21)	35.58 (2.13)	.33
Reading Attitude (RAS)	36.50 (2.14)	36.44 (2.14)	.008
Response Integrity (RIS)[c]	8.73 (2.90)	8.68 (2.90)	.0003

[a] $ES = (\bar{X}_E - \bar{X}_C)/s_W$.

[b] The mean scores represent item averages on the three-point scale are given in parentheses.

[c] A score of 9 represents a perfect response integrity score.

SUMMARY

An experiment was conducted by high school librarians in five high schools in which a random half of students in one class of tenth-grade English were given a special program designed to increase use of the library, and improve attitudes toward the library/librarian and reading. The treatment was found to have a statistically significant effect on library use and library attitudes for the librarians in the study. The findings were strong enough to allow generalizability to the population of librarians for library attitudes, but not on library use. The increase in use was much greater with some librarian than for others. Difference between the E and C groups on the reading attitude measure were not statistically significant.

The participating librarians were positive in their assessments of the value of the program.

REFERENCES

Davies, R. A. The school library media center: Instructional force for excellence (3rd ed.). R. R. Bowker, 1979.

Everett, J. Procedures for high school library use. Unpublished manuscript, Department of Educational Technology and Library Science, Tempe, Arizona: Arizona State University, 1984.

Havens, S. Academic libraries: myths and realities. Library Journal, 1984, 109, 1419-1421.

Hopkins, K. D. A strategy for analyzing ANOVA designs having one or more random factors. Educational and Psychological Measurement, 1983, 43 107-113.

Hopkins, K. D. and Stanley, J. C. Educational and psychological measurement and evaluation (6th ed.). Prentice-Hall, 1981.

Marchant, M. P., Broadway, M. D., Robinson, E., Shields, D. M. Research into learning resulting from quality school library media service. School Library Journal, 1984, 30, 22-24.

Schon, I., Hopkins, K. D., Everett, J., and Hopkins, B. R. The effects of a special school library program on elementary students' library use and attitudes. School Library Media Quarterly, 1984, 12 227-231.

Schon, I., Hopkins, K. D., Everett, J., and Hopkins, B. R. The effects of a special motivational intervention program on junior high school students' library use and attitudes. Journal of Experimental Education, 1984, 53, 97-101.